

The substituted claims differ from the claims originally on file as follows:

Claims 1, 4-6, 8, 17, 18, 21, 22, and 25 have been amended to more clearly define the invention.

Specifically, as recited and claimed in amended claims 1 and 18, the present invention is directed to a PIN photodetector with a first semiconductor contact layer configured as a mini-mesa structure, a semiconductor absorption layer that has a larger area than the mini-mesa structure, a passivation layer positioned between the mini-mesa structure and the absorption layer, and a second semiconductor layer. In relation to the passivation layer and the absorption layer, the mini-mesa structure is in contact with only the passivation layer. That is, the mini-mesa layer is *not* in direct physical contact with the absorption layer.

In the Written Opinion, claims 1 through 26 were indicated as lacking novelty under PCT Article 33(2) in view of D1 (U.S. Patent No. 4,771,325).

The D1 reference discloses a PINFET structure (10) with a p-contact (18) connected to a p region (21) that extends through an insulating layer (13) into an absorption layer (12) deposited on a substrate (11). Therefore, the D1 reference describes a semiconductor contact layer (18) that extends into, and hence is in direct physical contact with, the absorption layer (21). Accordingly, the D1 reference fails to disclose or suggest, and clearly teaches away from, a PIN photodetector with a passivation layer positioned between an absorption layer and a semiconductor contact layer configured as a mini-mesa structure such that the mini-mesa structure is in direct physical contact with only the passivation layer and *not* with the absorption layer, as claimed in amended claims 1 and 18. Hence, the D1 references fails to teach or suggest